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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,188	09/09/2003	Joseph E. Legare	Legare-PAUS0004	1617
58937 7590 05/15/2007 WOLFF LAW OFFICE, PLLC P.O. BOX 9855 CHAPEL HILL, NC 27515-9855			EXAMINER NGUYEN, TU MINH	
			ART UNIT 3748	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/657,188

Applicant(s)

LEGARE, JOSEPH E.

Examiner

Tu M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. An Applicant's Response and Amendment filed on March 8, 2007 has been entered. Claims 19-20 have been amended. Overall, claims 1-24 are pending in this application.

#### ***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-13, 16, and 21-24, drawn to an engine air-fuel ratio control system and method with exhaust gas sensor controlled each cylinder individually, classified in class 123, subclass 673.
  - II. Claims 14, 15, 17, and 18, drawn to an engine air-fuel ratio control system and method including exhaust gas condition responsive means in combination with engine condition responsive means, classified in class 123, subclass 679.
  - III. Claims 19 and 20, drawn to a method to control an internal combustion engine with treatment or handling of exhaust gas and having sensor or indicator of malfunction, unsafeness, or disarray of exhaust gas after-treatment device, classified in class 60, subclass 277.

3. The inventions are distinct, each from the other because of the following reasons:

Inventions of Group I, Group II, and Group III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01).

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In the instant case the different inventions have different functions. In Group I, the function is to adjust an engine operating parameter such as a fuel injection amount for each individual cylinder based on a synchronizing signal provided by an exhaust gas sensor during a transient load change. In Group II, the function is to adjust an engine operating parameter such as a fuel injection amount for each individual cylinder during a transient load change. And in Group III, the function is to judge an operating condition of a catalytic converter. Thus, the functions of the inventions of Group I, Group II, and Group III are clearly different.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. A telephone call was made to Kevin A. Wolff on May 13, 2007 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

***Response to Arguments***

5. Applicant's arguments with respect to the restriction requirement applied in the previous Office Action have been fully considered but they are not persuasive.

In response to applicant's argument that all of the claims should be examined together because each independent claim includes a catalytic converter, which should place all the claims in class 60, subclass 285 (page 16 of the Applicant's Response), the examiner respectfully disagrees.

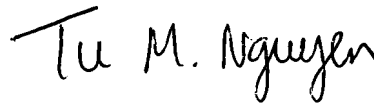
A catalytic converter in each independent claim in the pending application does not necessarily place the claim in 60/285 because there appears to be no linkage to the catalytic converter after it is claimed. In fact, in the current form, only independent claim 19 is concerned with a general control of an engine air-fuel ratio to each or a group of cylinders to promote a change (i.e., an increase in temperature) in the catalytic converter in order to diagnose the converter's working condition. The rest of the independent claims either deals with a control of an engine air-fuel ratio to each cylinder in response to an engine change condition (i.e., load change) (as in independent claims 14 and 17) or a control of an engine air-fuel ratio to each cylinder in response to an engine change condition (i.e., load change) with feedback from a sensor that detects an air-fuel ratio of the exhaust gas from each cylinder (as in independent claims 1, 3, 4, 6, 7, 12, 13, 16, 21, 23, and 24). It appears that the catalytic converter is not mentioned at all after it is claimed in these independent claims. Needless to say, such general claim on the existence of a catalytic converter in the exhaust system of an internal combustion engine is very obvious to one with ordinary skill in the art.

*Communication*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TMN

Tu M. Nguyen

May 14, 2007

Primary Examiner

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